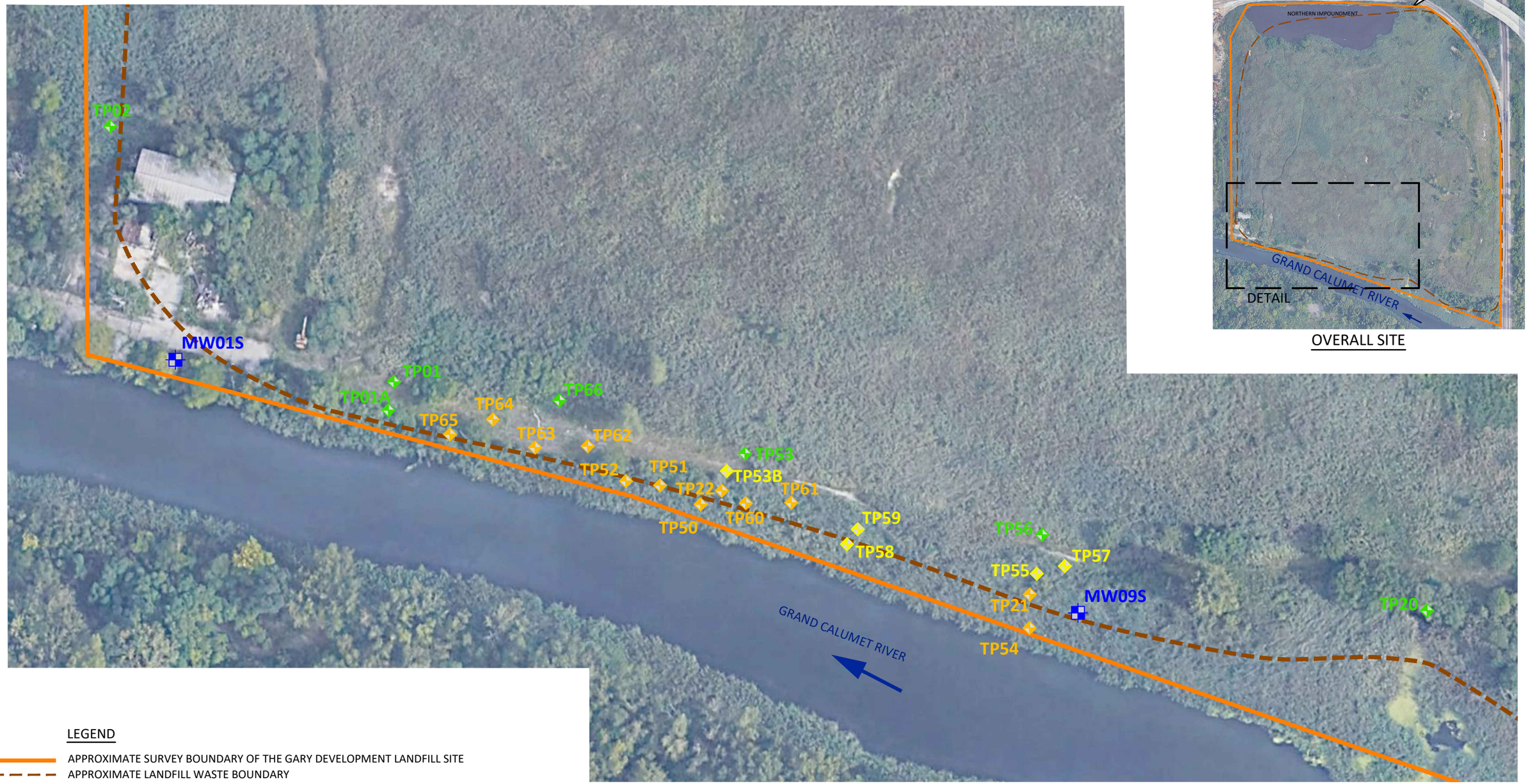


OVERALL SITE

DETAIL SITE

APPROXIMATE GRAPHIC SCALE

80 0 40 80 160

1 inch = 80 ft.

LEGEND

- APPROXIMATE SURVEY BOUNDARY OF THE GARY DEVELOPMENT LANDFILL SITE
- APPROXIMATE LANDFILL WASTE BOUNDARY
- RIVER FLOW DIRECTION
- APPROXIMATE MONITORING WELL LOCATION
- APPROXIMATE TEST PIT LOCATION (LIQUID WASTE OBSERVED)
- APPROXIMATE TEST PIT LOCATION (NO LIQUID WASTE OBSERVED)
- APPROXIMATE TEST PIT LOCATION (SHEEN/ ODOR OBSERVED)

SOURCE: SITE INFORMATION FROM THE FEASIBILITY STUDY BY PARSONS, DATED JULY 2021.
INCLUDING, BUT NOT LIMITED TO: SURVEY BOUNDARY, LANDFILL WASTE BOUNDARY, WETLAND DELINEATION, LNAPL AREA, MONITORING WELLS, TEST PITS LOCATIONS, AND PROPOSED LANDFILL LIMITS.
SOURCE: IMAGE ADAPTED FROM GOOGLE EARTH IMAGERY DATED OCTOBER 2020.

983748

PREPARED FOR:

GARY DEVELOPMENT
LANDFILL PRP GROUP

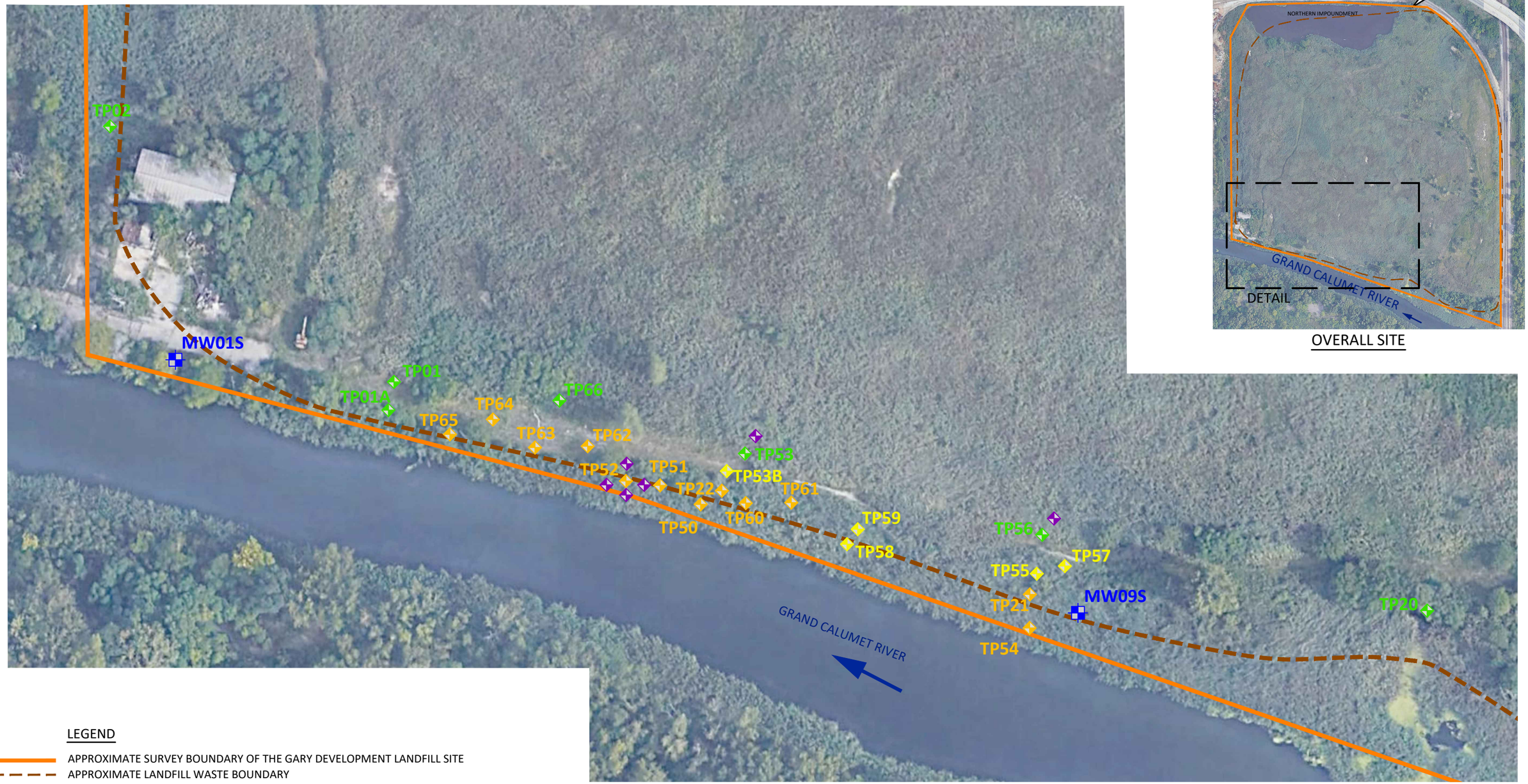
LNAPL DELINEATION MAP

GARY DEVELOPMENT LANDFILL SUPERFUND SITE
GARY, INDIANA

Weaver Consultants Group
CHICAGO, ILLINOIS
(312) 922-1030 www.wcgrp.com

DRAWN BY:	RMD
REVIEWED BY:	JK
DATE:	8/3/2022
FILE:	5328-300
CAD:	SITE LOC.dwg

FIGURE 1



OVERALL SITE

DETAIL SITE

APPROXIMATE GRAPHIC SCALE

80 0 40 80 160

1 inch = 80 ft.

LEGEND

- APPROXIMATE SURVEY BOUNDARY OF THE GARY DEVELOPMENT LANDFILL SITE
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- APPROXIMATE TEST PIT LOCATION (SHEEN/ ODOR OBSERVED)
- PROPOSED TEST PIT LOCATION

SOURCE: SITE INFORMATION FROM THE FEASIBILITY STUDY BY PARSONS, DATED JULY 2021. INCLUDING, BUT NOT LIMITED TO: SURVEY BOUNDARY, LANDFILL WASTE BOUNDARY, WETLAND DELINEATION, LNAPL AREA, MONITORING WELLS, TEST PITS LOCATIONS, AND PROPOSED LANDFILL LIMITS.
SOURCE: IMAGE ADAPTED FROM GOOGLE EARTH IMAGERY DATED OCTOBER 2020.

PREPARED FOR:

GARY DEVELOPMENT
LANDFILL PRP GROUP

PROPOSED TEST PIT LOCATION MAP

GARY DEVELOPMENT LANDFILL SUPERFUND SITE
GARY, INDIANA

Weaver Consultants Group
CHICAGO, ILLINOIS
(312) 922-1030 www.wcgrp.com

DRAWN BY:	RMD
REVIEWED BY:	JK
DATE:	8/3/2022
FILE:	5328-300
CAD:	SITE LOC.dwg

FIGURE 2

PARSONS

Gary Development Landfill Test Pit

Project Information

Location:
Gary Development Landfill Superfund Site, Gary, Indiana

Project Number:	Date:	Time:
449595	1/10/2017	1:10:18 PM

Test Pit Information

Test Pit Number:	Excavation Method:	Excavation Completed By:
TP01	Backhoe	RW Collins
Test Pit Logged By:	**Slope (%):**	**Surface Classification:**
Keith Thompson	16	Vegetation
Test Pit Length (ft):	**Test Pit Width (ft):**	**Test Pit Depth (ft):**
140	3	6
Topography:	**Water Depth (ft):**	**Waste Depth (ft):**
Irregular	4	2-5

Test Pit Comments:
North end of trench at original proposed location - waste encountered at 5' depth (trash and general debris, rubber, scrap metal) Down gradient the waste moves closer to the surface to 2' depth (brick, cinders, brick, concrete,hoses, rubber tire). Very hard material that thins to 1-2 foot depth interval with fine sand underlying at 125' south of initial proposed location. The waste continues to thin out and is delineated just to the north of the southern access road at 140' south of initial proposed pit location. Excavated a small pit to 5' depth to the south of the road - No waste. Rip rap and concrete cobbles only.

Edge of Landfill

Latitude (deg):	Longitude (deg):
41.612733	-87.428342
Altitude (m):	**Timestamp:**
171.300000	2017-01-10T13:22:04
Accuracy (m):	
5.000000	

Depth Measurements

Depth (ft):	USCS Classification:	PID Reading (ppm):
0-5	CL	0

Color:	Moisture:
Brown	Moist

Depth Comments:

North end of trench only.

Depth (ft):	USCS Classification:	PID Reading (ppm):
5-6	Waste	0

Color:	Moisture:
Black	Wet

Depth Comments:

North end of trench only.

Photos

North end of trench. Waste present at 5' depth.

Middle of trench. Waste present at 3' depth.

90' down gradient from initial proposed location. Waste still present at 2' depth. Cinders, brick, very hard.

South end of trench. Waste thinning out. Waste present at 1-2 feet depth interval with sand below it then thinning out and delineated just north of southern access road.

PARSONS

Gary Development Landfill Test Pit

Project Information

Location:
Gary Development Landfill Superfund Site, Gary, Indiana

Project Number:
449595

Date:
1/9/17

Time:
09:38:55

Test Pit Information

Test Pit Number:
TP02

Excavation Method:
Backhoe

Excavation Completed By:
Raw Collins

Test Pit Logged By:
Keith Thompson

Slope (%):
0

Surface Classification:
Vegetation

Test Pit Length (ft):
14

Test Pit Width (ft):
3

Test Pit Depth (ft):
6

Topography:
Smooth

Water Depth (ft):
0.5

Waste Depth (ft):
2

Test Pit Comments:
Encountered waste at 2' depth. Excavated out to property line until delineated. Waste delineated approximately 14' east of property line.

Edge of Landfill

Latitude (deg):
41.613340

Longitude (deg):
-87.429258

Altitude (m):
183.900000

Timestamp:
2017-01-09T09:55:14

Accuracy (m):
5.000000

Depth Measurements

Depth (ft):	USCS Classification:	PID Reading (ppm):
0-2	CL	O

Color:	Moisture:
Brown	Wet

Depth Comments:

Clay with high organic, wet, high plasticity.

Depth (ft):	USCS Classification:	PID Reading (ppm):
2-4	SP	0

Color:	Moisture:
Black	Wet

Depth Comments:

Waste at the ENE side of trench which tapers off to fine sand to the WSW side of the trench.

Depth (ft):	USCS Classification:	PID Reading (ppm):
4-6	SP	0

Color:	Moisture:
Black	Wet

Depth Comments:

Waste on the ENE end of trench that tappers off to sand on the WSW end of trench.

Photos

TP02 ENE end of trench.

TP02 WSW end of trench at property line.

PARSONS

Gary Development Landfill Test Pit

Project Information

Location:
Gary Development Landfill Superfund Site, Gary, Indiana

Project Number:
449595

Date:
1/12/17

Time:
10:57:35

Test Pit Information

Test Pit Number: TP20	Excavation Method: Backhoe	Excavation Completed By: RW Collins
Test Pit Logged By: Keith Thompson	Slope (%): 20	Surface Classification: Vegetation
Test Pit Length (ft): 25	Test Pit Width (ft): 3	Test Pit Depth (ft): 5
Topography: Irregular	Water Depth (ft): 0-4	Waste Depth (ft): 3

Test Pit Comments:
Excavated trench to the south down gradient. Waste present at 3' depth at he top. Delineated waste in wetland approximately 10' south from the toe of the landfill.

Edge of Landfill

Latitude (deg): 41.612227	Longitude (deg): -87.425318
Altitude (m): 176.500000	Timestamp: 2017-01-12T11:03:46
Accuracy (m): 5.000000	

Depth Measurements

Depth (ft):	USCS Classification:	PID Reading (ppm):
0-3	CL	0

Color:	Moisture:
Brown	Moist

Depth Comments:

Sandy Clay berm material.

Depth (ft):	USCS Classification:	PID Reading (ppm):
3-5	Waste	0

Color:	Moisture:
Black	

Depth Comments:

Waste material (plastic,brick,trash,rubber) which is delineated 10'south of the toe.

Photos

Looking north / up gradient.

Southern extent. Waste delineated.

PARSONS

Gary Development Landfill Test Pit

Project Information

Location:
Gary Development Landfill Superfund Site, Gary, Indiana

Project Number:	Date:	Time:
449595	5/24/2017	9:49:43 AM

Test Pit Information

Test Pit Number:	Excavation Method:	Excavation Completed By:
TP53	Backhoe	RW Collins
Test Pit Logged By:	**Slope (%):**	**Surface Classification:**
Parsons	10	Vegetation
Test Pit Length (ft):	**Test Pit Width (ft):**	**Test Pit Depth (ft):**
Topography:	**Water Depth (ft):**	**Waste Depth (ft):**
Smooth		

Test Pit Comments:
Hit layer of concrete and could not complete excavation. North of TP22 and TP53B and just north of access road.

Edge of Landfill

Latitude (deg):	Longitude (deg):
41.612543	-87.427368
Altitude (m):	**Timestamp:**
174.400000	2017-05-24T10:21:06

Accuracy (m):
5.000000

Depth Measurements

Depth (ft):	USCS Classification:	PID Reading (ppm):

Color:	Moisture:

Depth Comments:

Photos

PARSONS

Gary Development Landfill Test Pit

Project Information

Location:
Gary Development Landfill Superfund Site, Gary, Indiana

Project Number:	Date:	Time:
449595	5/24/2017	1:07:52 PM

Test Pit Information

Test Pit Number:	Excavation Method:	Excavation Completed By:
TP56	Backhoe	RWCollins
Test Pit Logged By:	**Slope (%):**	**Surface Classification:**
Parsons	3	Vegetation
Test Pit Length (ft):	**Test Pit Width (ft):**	**Test Pit Depth (ft):**
4	2	2.5
Topography:	**Water Depth (ft):**	**Waste Depth (ft):**
Smooth		

Test Pit Comments:

Couldn't dig to water, as digger hit thick underground concrete pad. Abandoned test pit. No PID measurement taken.

Edge of Landfill

Latitude (deg):	Longitude (deg):
41.612360	-87.426473
Altitude (m):	**Timestamp:**
173.300000	2017-05-24T13:12:25

Accuracy (m):
5.000000

Depth Measurements

Depth (ft):	USCS Classification:	PID Reading (ppm):
2.5	SC	

Color:	Moisture:
Rich brown	Moist

Depth Comments:

Photos

Parsons
40 LaRiviere Dr
Buffalo, NY 14202
Project Number: 449595.03010

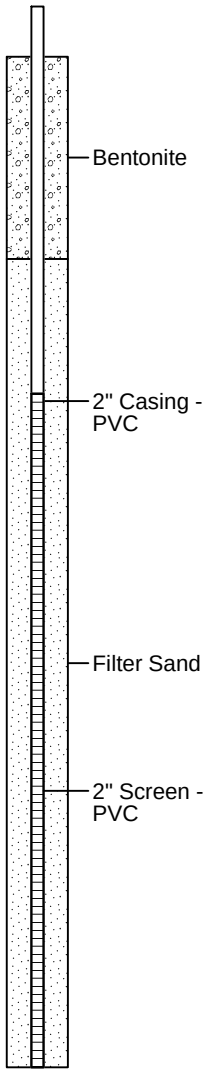
Date Started	: 9/28/2016
Date Completed	: 9/28/2016
Drilling Method	: HSA
Sampling Method	: Macro-Core
Drilling Firm	: Environmental Field Services
Lead Driller	: Floyd Smith
Geologist	: Dan Chamberland
Project Manager	: Mark Raybuck
Reviewed By	: Laura Green
Analytical Lab	:

MW09S

USGS Quadrangle	:
Easting	:
Northing	:
PID Model	: Mini RAE 3000
PID Calibration	: 100 ppm Isobutylene
	: Daily

Surf. Elev. 0	DESCRIPTION	USCS	GRAPHIC	Recovery %	PID (ppm)
0	SILT and SAND, fine to medium, well graded, some organic material, peat lense at 4.0ft bgs, black, wet	SW		100	0.0
-5	SAND, fine to medium, poorly graded, black, wet.	SP			
	SAND, fine to medium, poorly graded, brown, wet.	SP		100	0.0
-10	SAND, fine to medium, poorly graded, brown, wet.	SP		100	0.0
-15	END OF BORING				

Well:: MW09S
TOC Elev::



Monitoring Well Construction Information

BORING DIAMETER
Borehole : 4 1/4"

WELL CASING
Material : PVC Sch 40
Diameter : 2-inch
Joints : Threaded

WELL SCREEN
Material : PVC Sch 40
Diameter : 2-inch
Joints : Threaded
Opening : 0.010"
Length : 10-feet

SAND PACK
Material : Filter Sand

GROUT
Material : Bentonite Chips

WELL HEAD
Protection : Metal Stick Up

Well Cap : Locking Cap
Well Pad : Cement

Well Construction Materials:
4 bags of Filter Sand
2 bags of Bentonite Chips

12-05-2016 C:\Users\p004051a\Desktop\Gary Landfill\Boring log revisions 1\MW-09S SINGLE R1.bor

GARY DEVELOPMENT LANDFILL GROUNDWATER SAMPLING LOG

Site Name: Gary Development Landfill

Samplers: Matt Faryan; Cheryl Huey

Well ID: MW09S

Manual Entry:

Well Diameter: 2 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Purging Data

Method: Geopump

Initial Depth to Water (ft): 4.75

Depth to Well Bottom (ft):

Date: 11/07/2016 Time: 14:08:45 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	ORP (mV)	Comments
14:13...	4.75	180	0.23	7.82	8.26	76.8	15.4	20.88	-178	Cloudy, slight Amber color
14:18...	4.75	180	0.46	7.79	8.06	75.3	15.1	17.78	-190	
14:23...	4.76	180	0.69	7.61	7.59	23.6	11.7	17.13	-190	
14:28...	4.76	180	0.92	7.52	6.68	13.2	9.80	17.76	-194	
14:33...	4.76	180	1.15	7.49	6.34	11.1	9.38	17.57	-198	Clear
14:38...	4.76	180	1.38	7.50	5.53	5.6	9.31	17.51	-199	
14:43...	4.77	180	1.61	7.48	5.46	0.5	9.11	17.77	-201	
14:48...	4.77	180	1.84	7.47	5.39	0.3	9.12	17.72	-202	

Sampling Data

Method:

Date: 11/07/2016 Time: *(hhmm)* 14:50:56

Total Volume of Water Purged: 2 (gal)

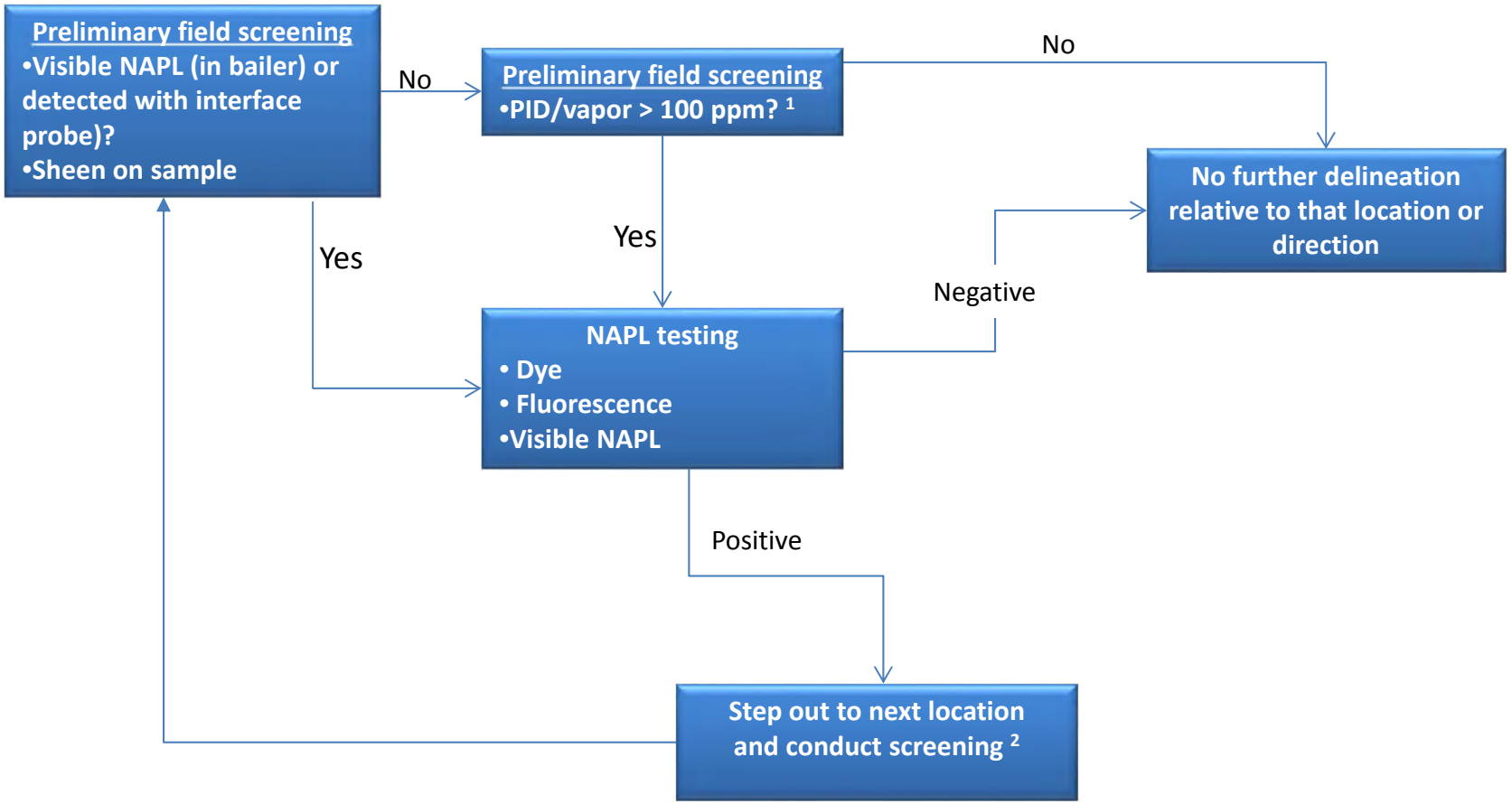
STABILIZED PARAMETERS		FIELD TEST KITS	
pH	7.47		
Spec. Cond. (mS/cm)	9.12		
Turbidity (NTU)	0.3		
DO (mg/L)	5.39		
Temp.(°C)	17.72		
ORP (mv)	-202		

Comments:

SAMPLE SET		
Parameter		**Method**
VOC	☑	8260B
SVOC	☑	8270D
PEST	☑	8081B
PCB AROCLORS	☑	8082A
Metals	☑	6010C
Mercury	☑	7470A/7471B
Cyanide	☑	9010C

Filtered and Unfiltered samples will be collected for Mercury, Cyanide, and Metals. Only filtered samples will be collected for Mercury, Cyanide, and Metals from direct push samples.

Figure 2
Delineation Decision Tree



Notes:

1. PID reading directly adjacent to/above a soil sample or split spoon.
2. Stop delineation if location is not accessible due to steep slopes, safety, or other access issues.

Ex. 5-Attorney Work Product

Ex. 5-Attorney Work Product

Ex. 5-Attorney Work Product